

## **Renilla Luciferase Protein Sequence**

MTSKVYDPEQRKRMITGPQWWRCKQMNVLDSFINYYDSEKHAENAVIFLHGNA  
SSYLWRHVVPHIEPVARCIIPDLIGMGKSGNGSYRLLDHKYLTAWFELLNL  
PKKIIIFVGHDWGACLAFAHYSYEHQDKIKAIIVHAESVVDVIESWDEWPDI  
EEDIALIKSEEGERMVLENNFFVETMLPSKIMRKLEPEEEFAAYLEPFKE  
GEVRRPTLSWPREIPLVKGGKPDVVQIVRNAYNAYLRASDDL  
PKMFIESDPGFFSNAIVEGAKKFPNT  
TEFVKVKGLHFSQEDAPDEM  
GKYIKSFVERVLKNEQ

## **Renilla Luciferase DNA Sequence**

atgacttcgaa agtttatgtat ccagaacaaa ggaaacggat gataactgg  
61 cccgactgttgt gggccagatg taaacaaatg aatgttcttg attcatttat taattattat  
121 gattcagaaa aacatgcaga aaatgcgtt atttttttac atggtaacgc ggcctttct  
181 tatttatggc gacatgttgt gccacatatt gagccagtag cgccgtgtat tataccagat  
241 cttattggta tggccaaatc aggcaaatct ggtatgtt cttataggat acttgatcat  
301 tacaaatatac ttactgcattt gtttgaactt cttatattac caaagaagat cattttgtc  
361 ggccatgatt ggggtgcattt tttggcattt cattatagct atgagcatca agataagatc  
421 aaagcaatag ttcacgcgtga aagtgtatgta gatgtgattt aatcatggga tgaatggcct  
481 gatatttgaag aagatattgc gttgatcaaa tctgaagaag gagaaaaat gttttggag  
541 aataacttct tcgtggaaac catgttgcac tcaaaaatca tgagaaatggt agaaccagaa  
601 gaatttgcag catatcttgc accattcaaa gagaaagggtt aagttcgatc tccaacatca  
661 tcatggcctc gtggaaatccc gttatggatggatggtaaac ctgcacgttgtt acaaaattgtt  
721 aggaattata atgcattatct acgtgcacgt gatgatattac caaaaatgtt tattgaatcg  
781 gatccaggat tctttccaa tgctatgtt gaaggcgcca agaaggatcc taatactgaa  
841 tttgtcaag taaaaggatc tcatatttcg caagaagatg cacctgtatca aatgggaaaa  
901 tataatcaaat cgttgcgttgc gcgagtttctc aaaaatgaac aataa

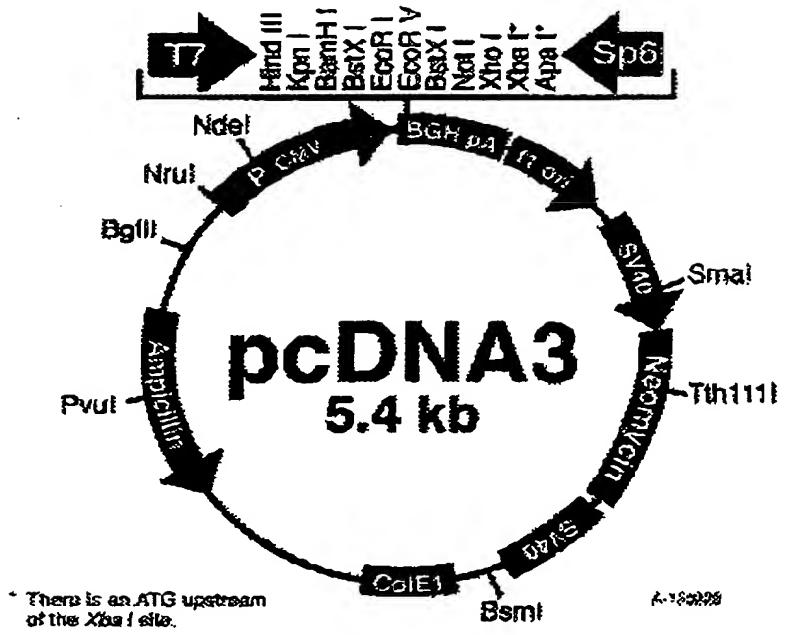
## **pcDNA3 Sequence**

GACGGATCGGGAGATCTCCGATCCCCATGGTCGACTCTCAGTACAATCTGCTCTGATGCCGATAGTTAA  
GCCAGTATCTGCTCCCTGTTGTGTTGGAGGTGCTGAGTAGTGCGCGAGCAAAATTAAAGCTACAACPA  
GGCAAGGCTTGACCGACAATTGCATGAAGAATCTGCTTAGGGTTAGGCCTTTGCGCTGCTTCGCGATGTAC  
GGGCCAGATAACGCGTTGACATTGATTATTGACTAGTTATAATAGTAATCAATTACGGGTCTTACGTT  
ATAGCCCATAATGGAGTTCCCGCTTACATAACTTACGGTAAATGGCCCGCTGGCTGACGCCAACGACC  
CCCGCCCATGACGTCAATAATGACGTATGTCCTAGTAACGCCATAGGGACTTCCATTGACGTCAAT  
GGGTGGACTATTTACGGTAAACTGCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCTA  
TTGACGTCAATGACGGTAAATGGCCCGCTGGCATTATGCCAGTACATGACCTTATGGACTTCTACTT  
GGCAGTACATCTACGTATTAGTCATCGCTATTACATGGTGTGCGGTTTGGCAGTACATCAATGGCGTC  
GATAGCGGTTGACTCACGGGATTTCCAAGTCTCCACCCATTGACGTCAATGGAGTTGTTGGCACC  
AAAATCAACGGGACTTCCAAAATGTCGTAACAACTCCGCCCATTGACGCCAATGGCGGTAGGCCTGTAC  
GGTGGGAGGGTCTATATAAGCAGAGCTCTGGCTAACTAGAGAACCCACTGCTTACTGGCTTATCGAAATTA  
ATACGACTCACTATAGGGAGACCAAGCTGGTACCGAGCTGGATCCACTAGTAACGGCCGCACTGTGCT  
GGAATTCTGAGATATCCATCACACTGGCGGCCGCTCGAGCATGCATCTAGAGGGCCCTATTCTATACTCTC  
ACCTAAATGCTAGAGCTCGCTGATCAGCCTCGACTGTCGCTTCTAGTTGCCAGCCATCTGTTGTTGCCCT  
CCCCCGTGCCTTCCTGACCGTGGAGGTGCCACTCCACTGTCCTTCTAATAAAATGAGGAAATTGCAT  
CGCATTGCTGAGTAGGTGTATTCTATTCTGGGGGTGGGGCAGGACAGCAAGGGGAGGATTGGG

**FIGURE 1A**

AAGACAATAGCAGGCATGCTGGGATGCCGTGGCTCATGGCTCTGAGGCAGAAAGAACAGCTGGGCT  
CTAGGGGATCCCCACGCGCCCTGTAGCGCGCATTAGCGCGGGGTGTGGTACGCGCAGCGTA  
CCGCTACACTTGCAGCGCCCTAGCGCCGCTCTCGCTTCTCCCTCTCGCACGTCGCG  
GCTTCCCGTCAAGCTCTAAATCGGGCATCCCTTAGGGTCCGATTAGTGTCTTACGGCACCTCGACC  
CCAAAAAATCTGATTAGGGTGTGGTCAGTAGGGCATGCCGTAGACGGTTTCGCCCTTG  
CGTTGGAGTCCACGTTAAATAGTGGACTCTGTCAGTAACTGGAACAAACTCAACCCATCTGGCT  
ATTCTTGTATTATAAGGGATTTGGGATTCGGCTATTGGTAAAAATGAGCTGATTAAACAAAAT  
TTAACCGCAATTAAATTCTGGAATGTGTGTCAGTAGGGTGGAAAGTCCCCAGGCTCCCCAGGCA  
GAAGTATGCAAAGCATGCACTCAATTAGTCAGCAACCAGGTGGAAAGTCCCAGGCTCCCCAGGCA  
GAAGTATGCAAAGCATGCACTCAATTAGTCAGCAACCAGTCCGCCCTAACTCCGCCATCCGCC  
TAACCTCGCCAGTCCGCCATTCTCCGCCATGGCTGACTAATTTTTATTATGCAGAGGCCAGG  
CCGCTCTGCTCTGAGCTATTCCAGAAGTAGTGAGGAGGCTTTGGAGGCCAGGCTTTGCAAAAGC  
TCCCAGGCTGTATATCCATTGCAAGAGACAGGATGAGGATCGTTGCACTGATTGAAC  
AAGATGGATTGACGCAGGTTCTCGGCCGTTGGTGGAGGGCTATTGGCTATGACTGGCACAAAGA  
CAATCGGCTGCTCTGATGCCCGTGTCCGGCTGTCAAGCGCAGGGGCCGGTCTTTGCAAGA  
ACCTGTCGGTGCCTGAATGAACTGAGGAGGCTATCGTGGCTGGCCACGAUGGGGTTC  
CTTGCAGCTGTGTCATCTCACCTGCTCTGCCAGAAAAGTATCCATGAGCTGCAATGCCGGCTGC  
AGGATCTCTGTGTCATCTCACCTGCTCTGCCAGAAAAGTATCCATGAGCTGCAATGCCGGCTGC  
ATACGCTTGATCCGGTACCTGCCATTGCAACCAAGCGAAACATCGCATCGAGCGAGCACCTACTCGA  
TGGAGCCGGTCTTGTGATCAGGATGATCGGACGAAGAGCATCAGGGCTCGGCCAGCCGAACTGTTG  
CCAGGCTCAAGCGCGCATGCCGACGGCGAGGATCTCGCTGACCCATGGCAGTCCGCTTGCGAATA  
TCATGGTGGAAAATGCCGTTCTGGATTGACGTTGTCGGCCGGCTGGGTGTCGGCCACCGCTATCAGG  
ACATAGCGTTGGTACCCGTGATATTGCTGAAGAGCTTGGCGGCCAATGGCTGACCGCTTCCTGCTT  
ACGGTATGCCGCTCCGATTGCAAGCGCATGCCCTCTGACGAGTTCTGAGCTTCTGAGCGGGAC  
TCTGGGTTGCAAATGACCGACCAAGCGACGCCAACCTGCCATCAGGAGATTGCAATTCCACGCC  
CTATGAAAGGTTGGCTCGGAATGCTTCCGGACGCCGGCTGGATGATCCTCCAGCGGGGATCTCAT  
GCTGGAGTTCTGCCAACCCAACTTGTATTGCAAGCTTATAATGGTACAAATAAGCAATAGCATCAC  
AAATTCAAAATAAGCATTTCACGCACTGCAATTGAGTTGTTGCTCAAACCTCATCAATGATCTTA  
TCATGCTGTATACCGTCACCTCTAGCTAGAGCTTGGCTAATCATGGTCAAGCTGTTCTGTGAA  
TTGTTATCCGCTCACAAATTCCACACAACTGAGGCCAGCAAGCTAAAGTGTAAAGCCTGGGTCCTAATG  
AGTGAAGCTAACATCACATTGCGTGCCTACTGCCGCTTCCAGTCGGAAACCTGCTGCGCAGCT  
GCATTAATGAATCGGCCAACCGCGGGGAGAGGCGGTTGCGTATTGGCGCTTCCGCTTCCGCTCAC  
TGACTCGCTCGCTCGGTGCTGGCTGGCGAGCGGTATAGCTCACTCAAAGCGGTAATACGGTTATC  
CACAGAATCAGGGATAACGCGAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCAGGAACCGTAAA  
GGCCGCGTGTGGCTTTCAAGGCTCCGCCCTGACGAGCATCACAAATCGACGCTCAAGTCA  
GAGGTGGCGAAACCCGACAGGACTATAAGATAACAGGCGTTCCCGCTGGAGCTCCCTGCGCTCTCC  
TGTTCGACCTGCCCTAACCGATACCTGCGCTTCTCCCTCGGAAGCGTGGCGCTTCTCAATG  
CTCACGCTGTAGGTATCTCAGTCGGTGTAGGTGCTCGCTCAAGCTGGCTGTGCAACGAA  
TCAGCCGACCGCTGCCCTATCCGTAACTATGCTTGTGAGCTCAACCCGTAAGACACGA  
ACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGATGTTAGGCGGTGCTACAGAGTTCTGAAGTG  
GTGGCTTAACTACGGTACACTAGAAGGACAGTATTGGTATCTGCGCTCGCTGAAGCCAGTTACCTTCGG  
AAAAAGAGTTGGTAGCTTGATCCGGAAACAAACACCGCTGGTAGCGTGGTTTTTGTGCAAGCA  
GAGATTACGCGCAGAAAAAGGATCTCAAGAAGATCCTTGATCTTCTACGGCTGACGCTCAGTG  
GAACGAAAATCACGTTAAGGATTGGCATGAGATTGAGGATCTCACCTAGATCCTTTAA  
TTAAAAATGAAGTTAAATCAATCTAAAGTATATGAGTAAACTGGCTGACAGTACCAATGCTTAAT  
CAGTGAGGCACCTATCTCAGCGATCTGCTATTGCTTCTCCATAGTGGCTGACTCCCGTGTGAGAT  
AACTACGATACGGAGGGCTTACCATCTGCCAGTGTGCAATGATACCGCGAGACCCACGCTACCGGC  
TCCAGATTATCAGCAATAAACAGCCAGCGGAAGGGCGAGCGCAGAAGTGGCTCTGCAACTTATCCGC  
CTCCATCCAGTCTATTAATTGTCGGGGAGCTAGAGTAAGTAGTGTGCTGAGTTAATAGTTGCGCAACGT  
TGTGCGCTTGCTACAGGCACTGCGTGTACGCTCGTGTGGTATGGCTTCAATTGCTCCGGTCTCC  
ACGATCAAGCGAGTACATGATCCCCATGTTGTGCAAAAAAGGGTAGCTCCCTGGCTCCGATCGT  
TGTAGGAGTAAAGTTGGCGCAGTGTATCACTCATGGTATGGCAGCAGTGCATAATTCTTACTGTCAT  
GCCATCCGTAAGATGTTCTGTGACTGGTAGTACCAACCAAGTCATTGAGAATAGTGTATGCGGCG  
ACCGAGTTGCTTGTGCCCGCTCAATACGGATAATACCGCGCACATAGCAGAACTTAAAGTGTCTCAT  
CATGGAAAACGTTCTCGGGCGAAAATCTCAAGGATCTTACCGCTGTGAGATCCAGTTGAGTGT  
CACTCGTGCACCCAACTGATCTCAGCATCTTTACTTCAACCGCGTTCTGGGTGAGCAAAACAGGAAG  
GAAAATGCCGAAAAAGGGATAAGGGCGACACGGAAATGTTGAATACTCATCTCCTTTCAATA  
TTATTGAGCATTATCAGGGTATTGTCATGAGCGGATAACATATTGAATGTTAGAAAAATAACA  
AATAGGGTTCCGCGCACATTCCCCGAAAAGTGCCACCTGACGTC

FIGURE 1B



### FIGURE 1C

## Cell Proliferation Assay

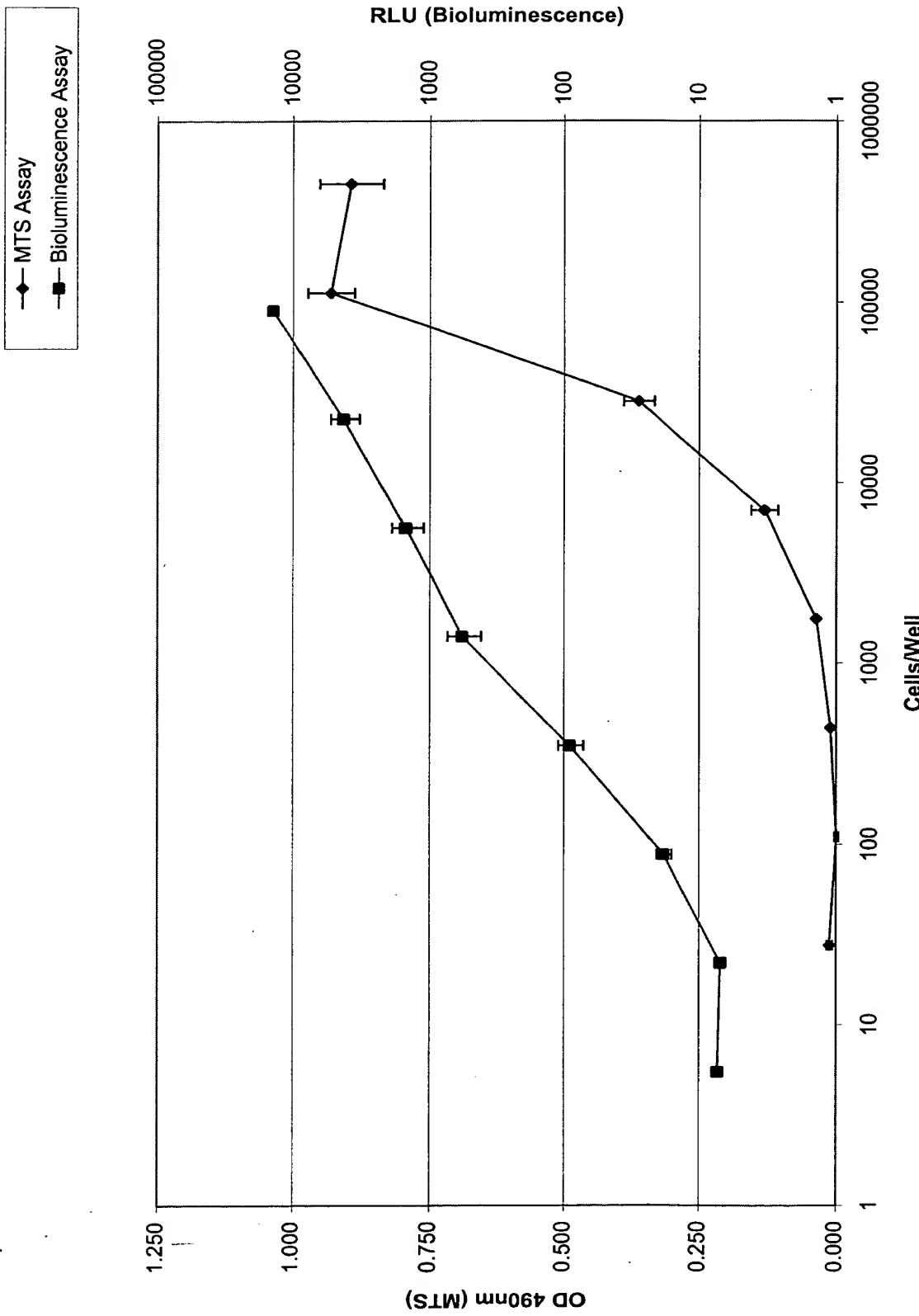


FIGURE 2

### HRL 2G6 Cell Proliferation Assay

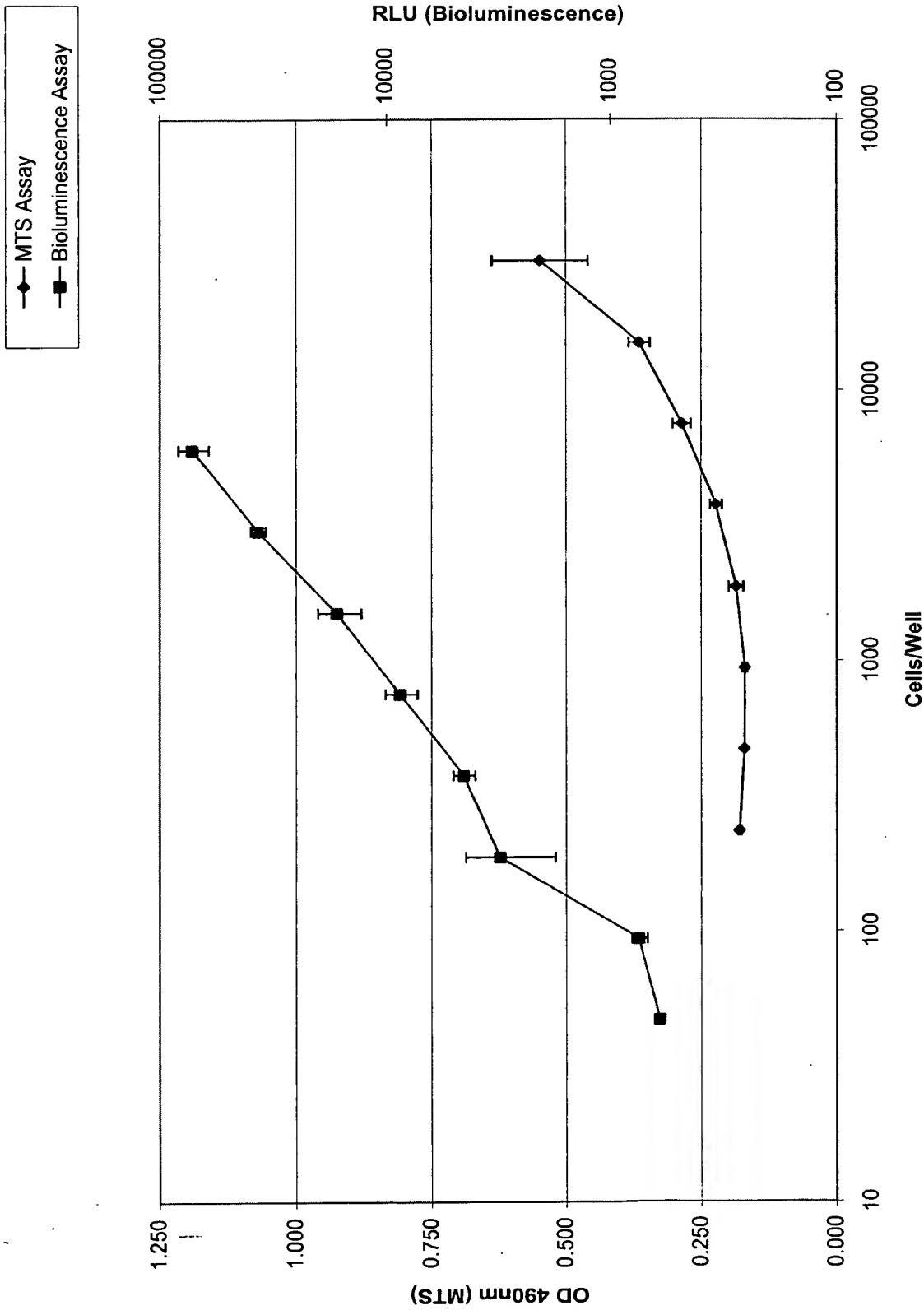


FIGURE 3